

NoSweat
Anti-Sweat Heater Control

Danfoss NoSweat is a dedicated anti-sweat heater control panel designed for supermarket glass door and refrigerator display cases.

- Up to 50% energy reduction of anti-sweat heaters
- Remote or panel mount capabilities
- Easily upgraded for retrofits
- No mechanical devices
- Controls on dew point
- Zero cross-over fired
- No filters required
- Low voltage runs
- No fans
- UL listed

REFRIGERATION &
AIR CONDITIONING

Applications

Designed for new installations or retrofits, NoSweat ties directly into an AKC 55 with an IO board or an ECI EC-1000/ERC-1000 controller with a 0-10v module. The controller is programmed with user-selectable high and low dew point setpoints.

NoSweat controls the anti-sweat heaters on glass doors and other supermarket display fixtures using a seven-second-control period. By comparing the actual dew point in the store to programmable, high and low dew point setpoints, the controller will duty cycle the anti-sweat heaters on in seven-second intervals. As the store's dew point increases, the "On" time will increase. Conversely, when the store's dew point decreases, the "On" time will decrease. A 0-10 volt output module signals the NoSweat panel to pulse the solid state outputs. A maximum of fifty receivers can be installed using one NoSweat transmitter board.

Specifications

Operating Environment

Ambient Limits: 32° F to 100° F
Humidity: 0-95% non-condensing
Mounting Guidelines: Allow for adequate airflow at the top and bottom of unit

Physical Characteristics

Dimensions
Cabinet Size: 16.5" W x 27.0" H x 5.0" D
Heat Sink: 1.75" W x 4.125" H x 6.0" D
Weight: 28 lbs.

Operating Parameters

Power Requirements: 120VAC @ 1amp
Wiring: 18-awg for remote receivers, high voltage switching loads are per N.E.C.
Inputs: 0-10V signal: 0 =Off //10V=100% On
Outputs: 16 amp/120V switching load/channel
Maximum Distance: 5000 feet

Energy Consumption Comparison

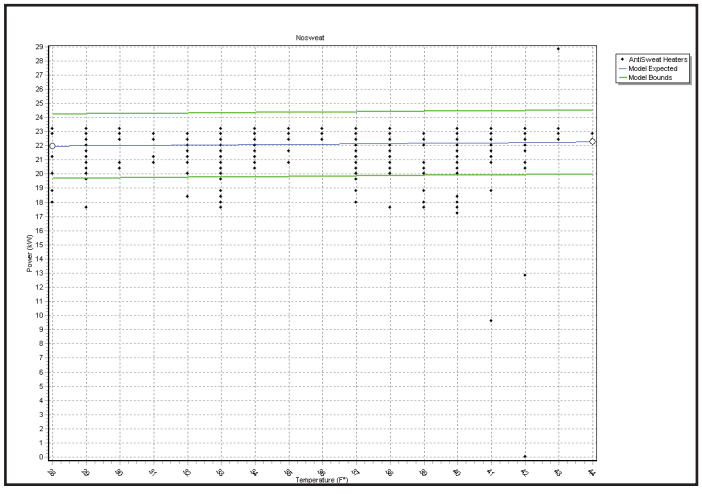


Chart 1 (Before NoSweat): Prior to the NoSweat installation, Store #36 was using 22 kWh and had no correlation with the inside dew point. Therefore, regardless of dew point, consumption would consistently be 22 kWh as shown in Chart 1. Data was collected in 15-minute intervals over a one-week period.

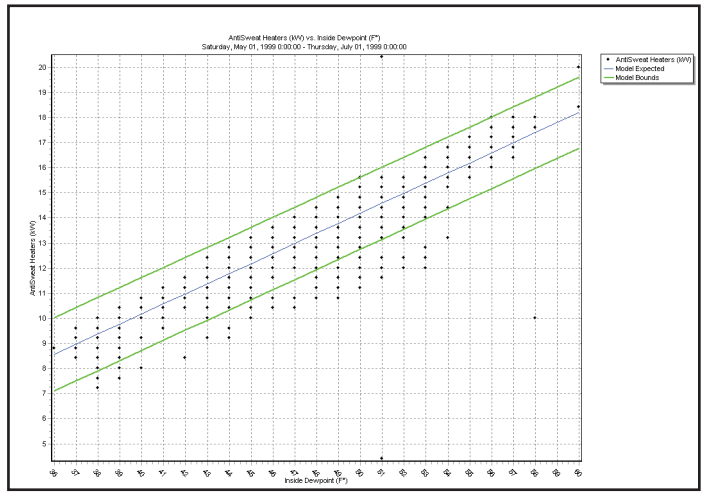


Chart 2 (After installing NoSweat): After installing NoSweat, Store #36 operates much more efficiently - consuming 11 kWh with the actual dew point at mid-setting. Chart 2 shows a linear relationship with inside temperature after installing NoSweat.

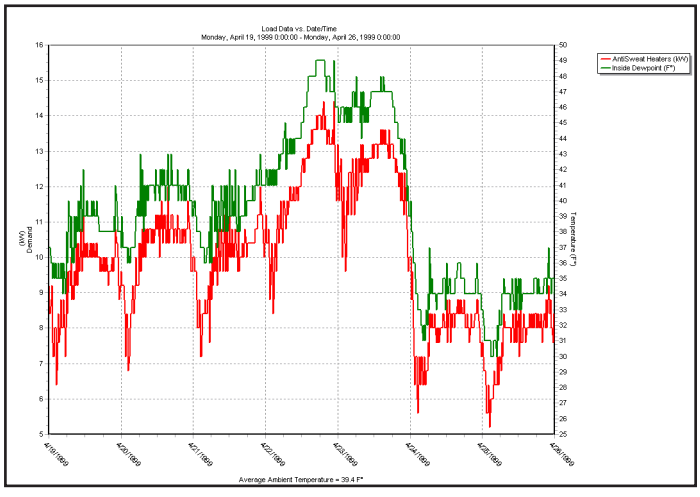


Chart 3 shows the relationship between kW usage and inside dew point after NoSweat was installed. kW is on the left axis; temperature is on the right. Consumption directly maps inside dew point, thereby ensuring optimum energy efficiency is achieved.

Note: Power consumption of heaters corresponds with the temperature of the case. Usage drops slightly during defrost.

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